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THE AMERICAN BEE JOURNAL

DEVOTED TO SCIENTIFIC BEE-CULTURE AND HONEY PRODUCTION.

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THE WEEKLY EDITION OF

THE AMERICAN
BEE JOURNAL

PUBLISHED BY

THOMAS C. NEWMAN,
EDITOR AND PROPRIETOR.

925 WEST MADISON ST., CHICAGO, ILL.
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THOMAS G. NEWMAN,
925 West Madison Street., Chicago, Ill.

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Letters for publication must be written on a separate piece of paper from items of business.

For \$2.75 we will supply the Weekly BEE JOURNAL one year, and Dzierzon's Rational Bee-Keeping, in paper covers; or the Monthly BEE JOURNAL and the book for \$1.75.

We have a few photographs (cabinet size) just taken, of the Rev. L. L. Langstroth, which we can send to those desiring them for 50 cts. each, postage prepaid.

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BEE JOURNAL

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Queen-Rearing, by Henry Alley.—A full and detailed account of TWENTY-THREE years experience in rearing queen bees. The cheapest, easiest and best way to raise queens. Never before published. Price, \$1.00

Bee-Keeper's Guide; or, Cook's Manual of the Apiary.—This Manual is elegantly illustrated and fully "up with the times" on every subject of bee-culture. It is not only instructive, but intensely interesting and thoroughly practical. The book is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. Cloth, \$1.25; paper cover, \$1.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—Fourth Edition. "Fully up with the times," including all the various improvements and inventions. Chief among the new chapters are: "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth, 75c.; in paper covers, 50c., postpaid.

Honey, as Food and Medicine, by Thomas G. Newman.—This pamphlet discourses upon the Ancient History of Bees and Honey, the nature, quality, sources, and preparation of Honey for the Market; Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc.; and Honey as Medicine, with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in English and German. Price for either edition, 5c.; per dozen, 40c.

Preparation of Honey for the Market, including the products and care of both comb and extracted honey, and instructions on the exhibition of bees and honey at Fairs, etc., by T. G. Newman. This is a chapter from "Bees and Honey." Price 10c.

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, 5c.

Bee Pasturage a Necessity, by Thomas G. Newman.—Giving advanced views on this important subject, with suggestions what to plant, and when and how. 25 engravings. This is a chapter from "Bees and Honey." Price, 10c.

Bees in Winter, with instructions about Chaff-Packing, Cellars and Bee Houses, by Thomas G. Newman. This is a chapter from "Bees and Honey." Price, 5c.

Food Adulteration; What we eat and should not eat. This book should be in every family, and ought to create a sentiment against adulteration of food products, and demand a law to protect the consumer against the numerous health-destroying adulterations offered us now. 300 pages. 50c.

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Fisher's Grain Tables for Farmers, etc.—192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork. Interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. 40 cents.

Moore's Universal Assistant, and Complete Mechanic, contains over 1,000,000 Industrial Facts, Calculations, Processes, Trade Secrets, Legal Items, Business Forms, etc., of vast utility to every Mechanic, Farmer and Business Man. Gives 200,000 items for Gas, Steam, Civil and Mining Engineers, Machinists, Millers, Blacksmiths, Founders, Miners, Metallurgists, Assayers, Plumbers, Gas and Steam Fitters, Bronzers, Gilders, Metal and Wood Workers of every kind. The work contains 1,016 pages, is a veritable Treasury of Useful Knowledge, and worth its weight in gold to any Mechanic, Business Man, or Farmer. Price, postage paid, \$3.50.

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Quinby's New Bee-Keeping, by L. C. Root.—The author treats the subject of bee-keeping so that it cannot fail to interest all. Its style is plain and forcible, making all its readers realize that its author is master of the subject.—\$1.50.

The Hive I Use.—Being a description of the hive used by G. M. Doolittle. Price, 5c.

Novice's ABC of Bee-Culture, by A. I. Root.—This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, \$1.25.

King's Bee-Keepers' Text-Book, by A. J. King.—This edition is revised and brought down to the present time. Cloth, \$1.00.

Langstroth on the Hive and Honey Bee.—This is a standard scientific work. Price, 52c.

Blessed Bees, by John Allen.—A romance of bee-keeping, full of practical information and contagious enthusiasm. Cloth, 75c.

Foul Brood; its origin, development and cure. By Albert R. Kohnke. Price, 25c.

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Chas. G. Dadant, giving in detail the methods and management adopted in their apiary. 15c.

Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, 10c.

Dzierzon Theory—presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. 15c.

Apiary Register, for SYSTEMATIC WORK in the APIARY. The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book. Prices: For 50 colonies, \$1.00; for 100 colonies, \$1.25; for 200 colonies, \$1.50.

Deutsche Buecher, Ueber Bienenzucht.

Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieses Pamphlet enthält Belehrungen über folgende Gegenstände—Derfligkeit des Bienenstandes—Honig pflanzen—Erziehung der Königin—Füttern—Schwärmen—Ableger—Versehen—Italienisieren—Züfeger von Königinnen—Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueste Methode für die Herrichtung des Honigs für den Handel beschreiben ist. Preis 40 Cents.

Honig als Nahrung und Medizin—von Thomas G. Newman. Dieses enthält eine klare Darstellung über Bienen und Honig des Alterthums; die Beschaffenheit, Qualität, Quellen und Zubereitung des Honigs für den Handel; Honig als Nahrungsmittel, angebend wie man Honigkuchen, Formkuchelchen, Puddings, Schaumkonfekt, Weine, u. s. w. zubereiten kann; ferner Honig als Medizin mit vielen Rezepten. Es ist für den Consumenten bestimmt, und sollte vieltausendfältig über das ganze Land verbreitet werden. Preis 6 Cents.

Das Pferd und seine Krankheiten—Von V. J. Kendall, M. D., enthaltend ein alphabetisch geordnetes Verzeichniss der verschiedenen Pferdekranheiten, sammt den Ursachen, Symptomen und der richtigen Behandlung derselben; ferner, eine Sammlung werthvoller Rezepte. Preis 25 Cents.

THOMAS G. NEWMAN,

925 West Madison St. CHICAGO, ILL.

Weekly Bee Journal,

DEVOTED TO THE INTERESTS OF THE PRODUCERS OF HONEY.

VOL. XX.

CHICAGO, ILL., MARCH 26, 1884.

No. 13.

THE AMERICAN BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,
EDITOR AND PROPRIETOR.

Caution to Beginners.

Since Huber opened out the combs of the hive "like the leaves of a book," to the inspection of the bee-keeper; and since Langstroth placed these combs into frames so that they may be handled, and the whole hive may be spread out for inspection from end to end and top to bottom, at any moment the operator may desire;—since then progress and improvement have followed each other and made rapid strides toward that perfection to which we are ever pressing on, but never attain. These facilities for inspection place before beginners a temptation to make a "toy" of the hive, and upon every occasion to "play" with and open it. We want to impress them with the idea not to disturb the bees except when it is essential to do so. To be continually opening the hive in the spring often exposes the brood to a "chill," and brings destruction to the colony, and does no good whatever. This "chilled brood" is sometimes the forerunner of "foul brood" so much to be dreaded by every bee-keeper. We, therefore, strongly advise *caution* in this particular to all novices.

An exchange very wisely gives this advice: "Whether chilled brood will eventually bring about the fell disease, 'foul brood,' depends on various circumstances; but whether or not this be the case ultimately, a whole neighborhood is endangered by a reckless owner of hives. We would, therefore, attempt to impress on all young bee-keepers the great care they should make it incumbent on themselves to take as to the manner and time of overhauling their hives, and this ad-

vice especially applies to this season of the year."

Bee-Keeping in Canada.

The growth of the bee interests in Canada is quite remarkable. Two things have been instrumental in its rapid development. First, the energy and push of Mr. D. A. Jones, and his efforts, in connection with Mr. Frank Benton, to procure the Bees of the Orient, and bring them to America for development and improvement; and secondly, the encouragement received by bee-keepers from the Toronto Fair, and the large premiums offered on bees and honey. The result of this was to "astonish the natives" with an exhibit, which was perhaps the largest ever made on American soil.

No wonder, then, that a late number of the *Free Press*, published at London, Ont., should remark that "there is a growing interest throughout Western Ontario in the matter of bee culture, and if the directors of fairs, and especially those of the Western Fair, were to give greater encouragement to exhibitors, the public generally would learn more of the extent and value of the yearly honey yield."

Then, as to the production of honey in Canada, the *Free Press* adds: "A colony comprises from 20,000 to 40,000 bees, and, under proper management, each of these should produce two new colonies every season. The character of the season has, of course, a good deal to do with this. As to the yield, it may be roughly stated that each colony should produce from 60 to 100 pounds of honey, according to the favorable character of the season; and, at the present time, such a production would represent a vast profitable result to the owner."

It is very certain that a liberal Premium list draws together exhibits, which, when aggregated, make a magnificent display. These, in turn,

create a demand for honey, among the masses, for general consumption, that is more than paramount to the increased number of bee-keepers. These astonishing displays are wonderful educators of the people, and it should be bourn in mind that it is to the interest of bee keepers generally to have them at every Fair, in every County, State and Province in America. Let the display at Fairs for 1884 be of such magnificence as to create a market for honey ten times as great as it ever has before attained.

The committee having in charge the matter of legislation against the spread of "foul brood" in Canada, has had a "set back." They were met with a refusal to introduce the bill into parliament.

Catalogues for 1884.—The following new Catalogues and Price Lists are received:

O. Clute, Iowa City—4 pages—Bees, Honey, Bee-Keepers' Supplies, and Class for Students of Apiculture.

Bright Bros., Mazeppa, Minn.—24 pages—Apiarian Supplies.

Dr. J. P. H. Brown, Augusta, Ga.—20 pages—Italian Bees, Queens, and Bee-Keepers' Supplies.

Nellis' Floral and Garden Instructor—58 pages—Mohawk Valley Seeds, Canajoharie, N. Y.

Wm. C. Wilson, 45 West 14 Street, New York—116 pages—Plants and Seeds.

☞ We have received a copy of a pamphlet entitled, "a Dictionary of Baptismal Names for Children." It contains 2,000 names with their meaning, and the countries from which they originated. It is published by John C. Stockwell, 25 Ann Street, N. Y., and the price is 25 cents.

☞ Cook's Manual in cloth and the Weekly BEE JOURNAL for one year will be sent for \$3. We have no more of the old edition left, and, therefore, the club price of that edition at \$2.75, is withdrawn.

☞ We now club the *British Bee Journal* and our Monthly for \$2.50.

CORRESPONDENCE

Read at Belleville, Ont., Convention.

Spring Management of the Apiary.

ALLEN PRINGLE.

Hitherto wintering has been considered the greatest obstacle in bee-keeping. But the difficulties of successful wintering are being gradually overcome; so that the experienced and intelligent bee-keeper, with proper facilities, can count, with a fair degree of certainty, upon being able to bring at least a large proportion of his colonies safely through the winter. But, owing to certain changes which the seasons are undergoing, a comparatively new difficulty has lately arisen, to supplement, as it were, the wintering problem.

This difficulty is, after the bees have been successfully wintered, to get them safely through the spring to the honey season, and have them ready for the honey flow when it arrives. From some causes, planetary or otherwise, the character of the seasons is undoubtedly changing; and as we cannot alter the face of Nature, we must, as far as possible, adapt ourselves and our bees to Nature's moods and variations.

Last spring, especially, was a very exceptional one; indeed, the whole season through seemed to be quite out of joint. The spring and forepart of summer were so cold and wet that the poor little bees suffered much; and many of those not specially cared for and protected had to succumb. So far as I could learn, there was greater mortality among the bees in Canada, last spring, after they were taken out of winter quarters than there was during the winter. For my own part I lost none at all in wintering; but lost 3 or 4 colonies in the spring, in spite of the most assiduous attention to them. Only 2 of these, however, succumbed to "spring dwindling"—the other 2 having lost their queens. But so very unpropitious was the spring, and also up to the middle of June, in this district, that had I not given my bees extra attention and proper treatment, I am satisfied I would have lost the most of them. Doubtless some of you had a similar experience.

I have, therefore, thought that this question of spring management is the most important one for our consideration at this meeting. Our bees are now fixed up in various ways for the winter. Whether the manner of their disposal in winter quarters has been wise or otherwise, it is past; and our next proceedings with our "little pets" will be in connection with the spring management.

The question is, "What ought the spring management to be?" In answer to the question, I propose to give my own views in the matter, subject, of course, to the criticism of others of you who may have had larger experi-

ence than myself. My own experience with bees has covered, altogether, about 20 years; yet I have much, no doubt, to learn. We all, perhaps, can still learn, no matter how much experience we have had, or how many books we have read. We have, it is true, our standard works. We have Langstroth, and Quinby, and Cook, and Newman, and Dzierzon, and others; but I have noticed one thing here, which is this: In a progressive system like bee-culture, the best and latest books on the subject get *left behind*, especially in practical details. They may not be left behind in principles, so far as they contain principles, for first principles never change. But it sometime happens in bee literature, as in other departments, that theories are adopted as principles before they are fully verified by facts and experience. In such cases oftentimes mere hypotheses have ultimately to yield to the stubborn facts of practical experience.

In the spring management of an apiary, there are some 2 or 3 paramount objects the bee-keeper ought steadily to keep in view, and endeavor to accomplish. The first is to preserve his bees from what is called "spring dwindling." The second is to get them in good strong condition by the time the first honey flow comes, so that they can duly take advantage of it. And the third is to make such provision for early queens and good drones as he may deem requisite.

As to the spring dwindling, it seems to be a fact that the bees wintered in cellars and bee houses are more liable to it than those wintered outside, properly protected. And here a mistake is, I think, often made in setting out the bees wintered inside too early. A colony well wintered and strong is not apt to dwindle in the spring if it gets anything like fair treatment. Do not not set them out too early; keep them thoroughly warm after they are set out; and feed judiciously of both pollen and honey, and you will reduce the spring dwindling to a minimum. The best time to set them out must, of course, much depends on circumstances, and the bee-keeper must use his own judgment.

I do not think it prudent to put them out for good much before the first natural pollen appears, especially if the spring is cold and backward. If, however, they get restless in their quarters, and dysentery should appear, they ought to be put out for a flight the first day that is sufficiently warm and fine. They can then be carried back again. But as pollen is required for the rearing of brood, in some cases where there is little or no old pollen in the hive, the colony might do better out if well protected and managed; for in such cases the artificial pollen for breeding can be more easily supplied them outside than in. I would, therefore, other things being equal, put the colonies with *least* old pollen out first, and keep those with *most* pollen in the longest. But how can I know how much pollen they may have in the spring before I put them out, you ask? Note the fact in the fall.

If bees are kept warm enough during the winter, and have plenty of honey, they will not use pollen until they begin to breed. If they are cold, and have to move about and exercise their wings to keep warm (for they do this), they will need nitrogenous food, and will then eat pollen. But even in view of this contingency, colonies with no old pollen may, if desired, be left in the cellar after breeding has commenced. The nitrogenous food, to supply the albumen for the eggs and the pollen for the brood, can be fed inside the hives in the shape of meal cakes soaked in honey; but it is better, I think, to feed the raw meal outside in the open air when the weather is fine. No definite or invariable rule can be given as to *when* to set out colonies, or *what* colonies to set out. The thinking and observant apiarist must consider all the circumstances and judge for himself. A good plan is, to have a strong colony out pretty early, and when it begins to carry in natural pollen the rest may pretty safely be put out.

If, however, we cannot give the inexperienced bee-keeper very definite instructions as to the exact time to put his bees out in the spring, we can give pretty explicit directions how to manage them after they are out. And the bee-keeper's season's crop of honey will depend largely upon his spring management of his bees. If this part of his work is wisely and skilfully conducted, his chances for an abundant return, other things being equal, will be good; if poorly managed his chances are slim; for the bee-keeper who does not know or care to manage his bees right in the spring will not know or care to manage them properly during the honey season. To be successful as a bee-keeper, his enthusiasm and care must reach beyond the inspiring honey season, and extend through the whole year.

Now, the very first thing to be done with the bees after they are set out in the spring, is to make them warm by closing all ventilating and other holes except a very small entrance; putting warm quilts on top; and taking such other measures as may be necessary to prevent the undue escape of heat from the hive, always bearing in mind that our protection does not *create* heat at all, but simply confines the animal heat which is generated by the bees. In the warm days when the sun is strong, there is, of course, *external* heat; but in cold windy days, and especially when the atmosphere is humid, the escape of the animal heat from the hive, unless it be well protected, is very rapid and very injurious to the bees. Every avenue and crevice ought, therefore, to be tightly closed except a very small entrance. In the spring, remember we want no "upward ventilation," as that matter will, in the open air, take care of itself—we want *heat*, or rather the bees and brood need it.

Having thus duly attended to this first spring requisite, the next thing to do, the first sufficiently warm day, is to overhaul every colony and clean out dead bees, etc. Also take away all superfluous combs, and crowd the

bees up into as small a space as necessary by means of division-boards. If the colony is weak, two or three of the best frames are sufficient to leave with it; and sometimes even one frame is enough at first for very weak ones. I have very little faith in *uniting* weak colonies in the spring, especially at this early season. I never unite in the spring except, perhaps, to get rid of a poor queen. My experience is decidedly against the practice, that is, when the weak colonies are properly handled. Having crowded the weak colonies up into small, warm quarters upon one, two or three frames, the stronger ones and strong ones may, of course, be given more room and frames, from three to a dozen, depending upon their strength and condition.

During this overhaul of the hives, note should be made of two or three important matters, and careful record made of them, so that the hives need not be opened any oftener during the cold, spring weather than is absolutely necessary; for I regard frequent spring openings of the hives as a very bad practice. Besides the danger of chilling the young brood, there is another serious objection to this practice. At such a season, especially in bad weather, it not infrequently happens that the disturbance caused by overhauling a hive, causes the bees to "ball" and kill their queen. I have known such instances. In the honey season, when the bees are gathering freely, you can knock them about almost with impunity with no bad results; but at all other times they ought to be handled with the utmost care. The one necessary spring overhaul should, therefore, be done with great care, but with dispatch, so as not to expose them too long; though the first opening in the spring seems never to disturb the bees as much as subsequent openings.

The two or three matters to be noted and recorded at this time are: First, is the queen all right? Second, how many bees? Third, how much honey is left in the hive? Fourth, is there any old pollen? And finally is there any young brood, or has the queen commenced to lay? These points can be all noted in your apiarian register, or simply upon a piece of paper left under the cover of each hive. You can then tell at any time, without opening the hive, what its condition was at the time of examination.

To illustrate the importance of this matter: Suppose just after the natural pollen season has commenced, and the bees, some of them, are freely breeding, a cold, rainy spell of weather comes on, lasting for a week or longer, as sometimes occurs, and the bees cannot get out with safety. The colonies that are breeding and short of pollen will undoubtedly suffer more or less; and part of the brood will perish unless the bees are fed the artificial pollen within the hives. This very thing happened last spring. At a time when the bees were breeding more or less, and natural pollen had appeared, there came a week or ten

days of very bad weather in which bees could not go out to forage without being, many of them, lost. In such a dilemma the breeding colonies short of pollen must be supplied with it or a portion of the brood will perish; and the bees in their desperation will go out in search of it and also perish. Now, the hives cannot be opened with safety in such weather to see which need assistance; but the aforesaid memorandum can be consulted, and all that are supposed to be short of pollen can be supplied. I simply take a cake made of barley or rye meal, or linseed cake meal, and place it over the bees on the frames under the quilts. This can be done in a moment or two without chilling the brood.

During the fine days of spring, just after the bees are set out, and before there is much natural pollen, nitrogenous food may be fed in the open air near the hives. Of such food the very best is cotton-seed meal, which is richer in nitrogen than the other kinds of meal. Next comes linseed cake meal, and next bean meal. In the absence of any of these, wheat, rye, pea, or corn meal may be used. Spread the flour or meal out on flat dishes or grain bags, and expose it in the warm sun near the bees, and you will see the busy little fellows fairly revel in it! If you put out different kinds, as I have often done, you will notice that they will literally swarm upon the kinds richest in nitrogen.

One prominent American beekeeper has, I am aware, "gone back" on the spring feeding, declaring it useless, and that he will feed no more; but it would take a much stronger argument than that to induce me to abandon the practice. Let us look into the merits of the matter for a moment. Take, for instance, a strong colony of bees wintered outside, and with little or no old pollen. As soon as the warm days of April come, and before the natural pollen appears, the bees begin to fly out and forage about in quest of *nitrogenous* food; for, bear in mind the queen, in order to lay, must have albumen, and the young brood must have pollen. Now, unless the nitrogenous food be supplied them, either inside the hive or outside, the queen cannot lay freely, the brood cannot be reared, and the colony can do little or nothing until the natural pollen appears. Meanwhile the old bees are dying off; and this is "spring dwindling."

Before the young bees, so lately started, are fit to carry on the operations of the hive, the old bees are perhaps all gone, or nearly gone; for it is well-known that as soon as an old bee begins to exercise freely on the wing, in the spring, his "pilgrimage in this world" becomes very short. And the worry of looking in vain for pollen is not calculated to delay the "shuffling off." In such a case, especially if the colony is not strong, the old bees disappear before there are young ones to take their places. This, in my opinion, is one of the principal causes of the much dreaded spring dwindling.

There are, it is true, under ordinary circumstances, few colonies but have

some old pollen, more or less, in the spring to go on with until the new supply comes in. But if Mr. Heddon's theory that pollen in winter is the prime cause of dysentery, has any truth in it, and is practically acted upon to any great extent, there will be many colonies from which the pollen has been removed in the fall, and hence *minus* pollen in the spring. All such, unless supplied with nitrogenous food in the early spring, could do nothing but dwindle.

I, therefore, maintain from these premises that spring feeding both of sweets to stimulate the queen, and of nitrogenous food to supply the albumen for the eggs and the pollen for the brood, is beneficial, and, withal strictly scientific rather than empirical. At the same time I freely admit that spring feeding and stimulation are sometimes attended by at least one evil; and must, therefore, be done with judgment and careful attention.

The evil is this: The daily feeding of sweets and pollen in the early spring sometimes has the effect of misleading the bees in regard to the season and weather. From this regular supply of the good things they conclude for certain that the honey season has commenced. Consequently they are apt to sally forth to work in bad, unseasonable weather, and many may get lost in this way. It is well, therefore, to shut them in on cold, windy days, and give them a nibble of cake and honey to keep them busy, and to keep the queen at her post of duty. The regular feeding should be done in the evening. As the spring advances and the weather gets warm, with increase of young bees, each colony must get more room and more comb. Keep the queen busy by supplying her with a frame of comb from time to time. Take a frame with some honey at the top and empty comb below (I speak here of the deep frames), scrape the caps off, and place it in the centre. But in enlarging the space of each colony, and supplying additional frames of comb and honey, we must be careful to "make haste slowly." Do not go too fast. It is very easy to make a mistake here, especially if the weather is cool. Use your best judgment. And in taking out frames of brood from the strong colonies to reinforce the weak, never give much brood at once to a weak colony. If you do you will feel the pain and mortification of finding your nice frame of brood lost. The handful of bees, not being able to protect the brood, it perishes.

Years ago I made that mistake, but have got over that as well as other errors. Experience is the best school, but the tuition is high, the expenses sometimes heavy. But this plan of building up the weak colonies in the spring at the expense of the strong is not, by any means, an unmixed good. There is this one evil about it which, no doubt, some of you have experienced. It sometimes happens that in robbing the best colonies to build up the others so as to get them all strong by the time the honey flow comes, you find when it does arrive that instead of having all of them fit for

good work you have all in fair condition, but none at all in first-class order to take advantage of the flow.

This is a great mistake, and entails great loss. You might far better have a portion of your colonies strong and in first-rate condition to work when the flow comes, and the rest simply able to go on nicely without giving you any surplus, than to have all in fair condition, but not able to give you much surplus. And a portion of them would be in first-class order when needed, were they not systematically and unscrupulously depleted to build up the others. No watchful bee-keeper will be apt to make this mistake more than once. Here, again, experience is salutary but dear. Of course in calculating beforehand, in the spring, how long it will be before your young workers will be needed for action, it is hard to hit the mark every time; and we do not care to have to feed a lot of idle bees for two or three weeks before the battle commences.

Knowing the time from the egg to the perfect bee, and also the time your young bee hangs around the house and chores inside before it goes to work outside, you may add these times together and calculate (as you may think) with mathematical certainty just when to urge your queens up in laying; and, after all, Nature, in her freaks, may sell you in the most ridiculous fashion! We had a realizing illustration of this last season. The fruit bloom was abundant, indeed super abundant, and rich in the coveted nectar; but when did it come? Why, about two weeks or more after the usual time. So you see the bee-keeper must keep his "weather eye" open in the spring on Dame Nature as well as on his queens, or he will surely get "left," with all his bee-lore. In bee-keeping, as in almost every other avocation of life, "eternal vigilance" is the price of success.

Selby, Ont.

[The report of the Convention will appear in our next.—Ed.]

For the American Bee Journal.

Size of Brood Frames.

W. J. DAVIS.

About two years ago I gave a description (in the BEE JOURNAL) of a brood frame I was using by way of experiment, with a view of adoption in case results proved satisfactory. I was not at the time aware of the fact that so many bee-keepers were looking for better returns from their bees by the use of a shorter brood frame. The size I chose was $11\frac{1}{2} \times 8\frac{1}{2}$, inside measure, with a 14-inch top-bar. I am so well pleased with their use, that all the hives I now make are for frames of that style. Have tried from 8 to 12 frames per hive. For my home apiary I prefer 8 frames.

The reasons for my preference of short brood frames are these: 1. The better clustering of a colony for winter; that is, less unoccupied space at

the end of the frames. As bees in this latitude must resist the cold for 7 months in the year, this consideration should not be over-looked.

2. As I secure my surplus comb honey above the brood nest (not at the side), the bees are forced to enter the surplus boxes at the beginning of the honey harvest.

3. As every square inch of nice worker brood comb represents that amount of capital in the hands of the bee-master, and the amount should not be greater in any one hive than can be used to the very best advantage; and any store comb or drone comb above a very limited amount is a positive damage in the brood nest.

4. Greater ease in equalizing colonies in spring and summer, and equalizing stores in autumn. Other reasons might be given, but the above will suffice for the present.

Some, I have no doubt, are ready to say, such a hive is altogether too small and bees would not secure a winter supply of honey. With improved bee-culture it does not matter whether they do or not, if they give a satisfactory amount of marketable honey. But in point of fact and actual experience, I find small hives, quite as likely as large ones, to contain sufficient stores for winter. Another, probably may say such small hives could not have a strong working force by the time white clover blooms. Let us see; a colony of bees can better warm a small hive in early spring, and, hence, can surely breed as fast as in a large hive.

In this locality we have no need of a strong working force before June 10, which is the time the white clover begins to bloom. Let us suppose a hive contains 8 combs of above size, on May 1, and each comb contains 98 square inches, or say 780 square inches of comb in the hive; each square inch contains 50 cells, or 39,000 cells in the hive. Let us allow one-half for pollen and honey for immediate use (which is a very large estimate for the month of May, including a reasonable amount of drone comb), and we still have room for the production of 19,500 worker bees every 20 days, or nearly 1,000 per day. It will readily be seen that a small hive will be crowded with bees much earlier in the season than a large one.

In accordance with a suggestion of one of your correspondents (which, I think, a good one), I will say that I have handled bees for over 35 years, in the same locality, and with an average of about 100 colonies. Have used the standard Langstroth frame for 23 years. Have used from 8 to 24 frames to the hive. Have 50 hives that take 12 frames in the brood-chamber, and can add 12 to an upper story of the same hive for extracting, or in place thereof two sets of surplus frames. I have my bees now, about one-half of them in long (Langstroth), and the balance in short (Langstroth) frames.

I cannot agree with Dr. Tinker that all brood frames not of a certain length should be called by some other name than the Langstroth. If I understand it aright, the main features

of the Langstroth patent consisted of separate comb frames resting on rabbets, with small space above, and at ends of frames. I could not tolerate any hive with close fitting top bars, or without the shallow space above the frames. In the matter of brood frames, I am in favor of every man using such size as he pleases. In the controversy between Mr. Demaree and Dr. Southwick, I think, for his latitude, the Doctor has the argument on length of frame, and Mr. Demaree on the depth, for any latitude. Youngsville, Pa.

For the American Bee Journal.

Use Separators? Yes.

H. D. BURRELL.

For four years I have made a specialty of honey production, keeping an average of about 100 colonies, spring count. These have produced in that time over 23,000 pounds of surplus honey, mostly comb. Separators were used with about half the amount; hence, I have had ample opportunity to judge which is the better way. The old argument (not often heard now), "separators take off one-third the honey crop," was long a stumbling block with me. I labored long and faithfully to persuade myself that I could do without separators, but signally failed. Different locations, seasons, races of bees, sections and methods of management all have an influence, and must be considered in examining the subject. I have experimented long and carefully, and on a large scale, during eight years' experience with bees, to determine the facts. Have used wide frames holding sections both one and two tiers deep, and cases and racks of many patterns; sections $1\frac{1}{2}$, $1\frac{1}{8}$, $1\frac{1}{4}$, $1\frac{1}{2}$ and 2 inches wide, holding from 12 ounces to 2½ pounds of honey.

This season I shall use no sections without separators, although I have quite a stock of one-pound sections on hand $1\frac{1}{4}$ inches wide. That separators reduce the honey yield at all, I have been unable to discover. But I have found that where separators are used the honey cappings are whiter, and not nearly so many combs are soiled, many of the bees, I suppose, walking on the separators instead of on the honey.

The main objection to using separators, in my opinion, is their first cost, but this is far outweighed by the greater ease with which separated sections can be manipulated, the projecting wood side pieces protecting the combs. This is an important item where inexperienced and often careless help has to be employed; also in the wholesale honey house. Buyers or salesmen usually draw sections for examination from different parts of the crates of honey on sale, and not very carefully either. If combs are bulged, broken cappings and leaking honey result, and those crates are not wanted. Often I have watched this tableaux in wholesale houses. Honey stored between separators will meet with fewer accidents, causing leakage,

and give better satisfaction to retailer and consumer.

What an unsightly object a crate of leaking honey is! It is much more convenient to retail sections of honey by the piece, than to take time to weigh each one, and they are sold largely in that way. When separators are not used, the sections vary so much in weight it cannot be done. Then the smooth, symmetrical snowy blocks of semi-transparent honey, which fairly make the mouth water, look far more attractive than the irregular, warty, bulged or hollowing ones, and meet a more ready sale. Many a time have visitors in my honey room pointed to these blocks in a pile of less even sections, and exclaimed, "What a nice one that is!" I think I have never had 50 sections which could not be crated for shipment, but I can crate the separated ones twice as fast as those not separated.

The leading honey-dealer of Chicago told me he would far rather sell separated honey. Buyers are constantly becoming more discriminating, and I predict that soon separated honey will sell quicker, even if it does not bring more money—quite an item in our overstocked markets. Even here in the West, where the market does not call for glassed sections, time will tell that it pays to use separators.

I use a section case, and practice a system similar to Bro. Heddon's well-known and deservedly popular one. Have used the Heddon case largely with individual tin separators for each section. This necessitates much labor and expense, but I should certainly follow that plan if there were no better one. I will not use wide frames. They are an abomination. Last year I used about 150 cases similar to the Heddon case, but in which the partitions are omitted and the sections held in place by narrow band-iron supporters across the bottom of the case. This case allows the use of separators, separators of wood 1-16 inch thick were used to give entire satisfaction in these cases. I prefer them to tin. The same separators tacked to wide frames I do not like.

In the modified Heddon case they are fastened to nothing permanently, and when not in use are piled up out of the way, and no warping or splitting occurs, though they are pared from basswood logs in a berry box factory. Not being tacked to a frame, propolis is easily scraped from them. Bees seemed no more inclined to attach comb to them than to tin separators. Indeed, I have been annoyed more by bees building into and attaching combs to the sides of adjoining narrow sections where no separators were used. I carefully set all hives with a level, too. (No cases or separators for sale.)

I have found the chief advantage of separators in my method of using surplus section cases. They are tiered up in the usual way until $\frac{1}{2}$ to $\frac{3}{4}$ of the sections in the upper case are finished. Then the case is quickly and easily cleared of bees and carried to the honey house. Here, away from robbers and angry bees, the case can be manipulated when convenient. The

unfinished sections, being straight and regular, are easily placed in cases and returned to the bees. By this plan combs are seldom soiled by remaining too long with the bees, and fewer cases are in the hive at a time, thus concentrating the work of the bees and economizing the heat of the hive. By this plan, too, more sections are finished, and fewer unfinished ones are left at the close of the season. I find that usually where cases are tiered up more than two high, work goes on very slowly above that point. Especially is this true during the cool nights of late summer. More time is usually required to get the last half dozen sections in a case finished, than all the others.

Where separators are not used, it is a vexatious, tedious task to return the unfinished sections to the bees. If they are not perfectly matched, trouble ensues. Those where the combs come but a trifle too close, are bridged together, and cannot be separated without causing leakage. If but a trifle too far apart, and the adjoining combs are capped, new work is commenced on top of the capping, making unsightly sections.

With me the use of separators avoids more of the annoyances and petty vexations of our calling than any other improvement in bee-keeping. I would willingly, if necessary, lose 5 per cent. of each honey crop rather than dispense with them.

Bangor, Mich.

For the American Bee Journal.

Single-Walled vs. Chaff Hives.

G. M. ALVES.

Mr. Heddon makes some remarks in a recent number, that set forth a correct theory. Bee-keepers frequently make the mistake of assuming the habitations of bees as analogous to their own, viz: that walls for bees, as well as those for man, should be at all times as non-conducting as possible. Now a little reflection will show that the same conditions do not obtain in both cases. A man's bodily heat has no appreciable effect on the temperature of his room, whereas with bees, the heat of their hive is generated by their bodies.

In our dwellings the walls should be good non-conductors at all times, for the reason that "what will keep out the cold, will also keep out the heat." The walls of hives should be good non-conductors in cold weather certainly, but in very warm weather a hive, provided it is shaded, with conducting walls, would be more comfortable to the bees, for the reason that the accumulated and excessive heat generated within, could pass off more readily into the atmosphere.

In this respect, bee hives are not analogous to our dwellings, but to our clothing; i. e., to be comfortable should be fair conductors in summer, and non-conductors in winter.

The soundness of this theory is self-evident, and should teach us to make our hives of rather thin walls, which should be well-shaded in the heat of

the summer, and if suffered to remain out-of-doors all the year, should be protected by an outer covering in winter. This plan would seem also to be agreeable to cheapness of construction, and facility of handling in the working season.

It would hence seem that the use of chaff hives should be avoided.

Henderson, Ky.

For the American Bee Journal

Tiffin, O., Convention.

In response to the call a number of the bee-keepers met March 15, and organized by calling Mr. Wm. C. Hamilton to the chair, and Mr. J. T. Martin to act as Secretary.

The first question discussed was: "Shall we have a county bee-keepers' association?"

Several spoke of the necessity and benefits that would be derived from an association, holding meetings every three months, or oftener if thought best, when the motion was carried unanimously.

On motion, the chairman appointed Messrs. J. T. Martin, Marcus Holtz, and Michael Bower a committee to draft a constitution and by-laws and report the same in the afternoon.

The merits of different forms of hives, sections and frames were discussed, when the meeting adjourned till 1 p. m.

At 1 o'clock the chairman called the meeting to order, and called for the report of the committee on constitution and by-laws.

J. T. Martin read the report, which was received and the committee discharged. The report was taken up, discussed, portions re-read, and with a few slight changes was adopted.

Eighteen then signed the constitution, representing 250 colonies of bees.

The election of officers followed, resulting in the election of E. J. C. Troxel as President; J. L. Fisher, Vice-President; J. T. Martin, Secretary; Wm. C. Hamilton, Treasurer, and M. Holtz, J. L. Fisher, and J. T. Martin as executive committee.

The topic, "Early spring treatment," was discussed, different views being advanced as to how bees should be managed in the spring.

Quite an interesting discussion followed on the qualities of the different breeds of bees.

Mr. Feasel gave his experience with Italians, Cyprians, Albinos and Holy Land bees.

In connection with the different varieties of bees, the merits of honey producing plants were discussed with much interest.

Marcus Holtz exhibited a couple of his make of hives, having established a factory near the city.

Mr. Hamilton placed on the table a glass jar of beautiful extracted honey.

Mr. H. H. Overmyer sent in a dozen jars of very nice extracted honey; being unable to be present himself, on account of a death in his family.

The meeting adjourned till the third Saturday of April, at which time a much larger attendance and a more interesting meeting is anticipated.

J. T. MARTIN, Sec.

For the American Bee Journal.

Are Bees Taxable in Michigan?

E. B. SOUTHWICK.

I notice Prof. Cook's answer to Mr. Cowan's question. I like to pick at Prof. Cook, when I get a chance, for two reasons: One is, the chances are so rare that they are very valuable on account of their scarcity; the other is that he is always so pleasant about it. He says: "All unexempted property is liable to taxation." Right. He also says: "Bees are property." Not in the sight of the law. When the law recognizes property, it protects the man in the holding of that property. Not so with bees. The only claim he has is the ability to induce them to make his place their home; if the bees fly away from his hive and fly over to his neighbor's, and his neighbor puts them in a hive, they are his bees until they change again as before, without the knowledge of the owner. They may change owners. The law recognizes many ways that property changes hands, but in no way without the order of law or the owner's consent; and as the bees change hands frequently in this way, and the law protects the parties in it, it is plain that the law does not consider them property.

Bees, wild turkey, deer, and all that go-where-you-please kind of animals or insects, cannot be considered property in law until dead. For instance, a man has a tame deer; he gets out of his enclosure, runs into his neighbor's woods, the neighbor kills him, then he becomes property in law, that is, the property of the one who shot it. This is the reason bees are not taxed; there are always some who understand the old law that has ruled for hundreds of years. Bees certainly are not taxable; the only way to get a revenue from them, is the way they do with dogs, make a law charging license to keep bees. All the property about the apiary is taxable, but not the bees. I do not believe there is an administrator in Michigan, unless ignorant or officious, who will attempt to assess bees.

Mendon, Mich., March 13, 1884.

For the American Bee Journal.

Southeastern Michigan Convention.

The Bee-Keepers' Association of Southeastern Michigan met at Adrian, on Wednesday, Jan. 23, 1884.

It being a cold and stormy day, the bee-keepers were a little late. The meeting was called to order by Pres. Cutting at 11 a. m.; the secretary not being present, his report was deferred till the afternoon.

The meeting was opened by reading a paper by Mr. Howes, on reversible frames, with a description of a device of his invention, by which the frames can be suspended in the hive in a hanging position, the same as an ordinary frame; at the same time allowing the bee-keeper to reverse the frame at will. The device serving the double purpose of reversing the frame and a metal corner.

After some discussion, the convention adjourned.

In the afternoon, the meeting was called to order by the President, at 1.30 p. m. The Secretary's report was read and adopted.

The Treasurer, Mr. G. J. Pease, of Ann Arbor, not being able to attend, the Secretary read his report, which was also accepted.

Dr. A. B. Mason, of Wagon Works, O., then read a paper on Foul Brood, which was discussed by Messrs. Howes, Edmiston, Gibson, and others.

A paper on "Bee-keeping; past, present and prospective," was then read by Mr. D. G. Edmiston.

A committee was appointed to confer with the executive committee of the County Agricultural Society, in regard to better accommodations for exhibits at the fair; also to have the apianian department of the premium list revised.

The election of officers was then held with the following result:

President, Mr. Frank W. Gilbert, of Adrian.

VICE-PRESIDENTS.

Dr. C. F. Ashley, Ypsilanti, Washtenaw Co.
Joseph Butler, Jackson, Jackson Co.
Frank L. Wright, Plainfield, Livingston Co.
G. H. Denman, Pittsford, Hillsdale Co.
Robert Forsyth, Blissfield, Lenawee Co.
M. H. Hunt, Bell Branch, Wayne Co.
Mr. Scranton, Dundee, Monroe Co.

A. M. Gander, of Adrian, Secretary.
D. G. Edmiston, of Adrian, Treasurer.

It was voted that the next annual meeting be held on the first Wednesday of December, instead of January; also that the next annual meeting be held at Adrian.

Several interesting questions were then discussed; among them were: "How shall we winter our bees?" Dr. Mason prefers a good cellar, some damp, but the bees should have no pollen. The others were: "Shall we allow swarming, or divide?" "Which hive shall we use?" The Langstroth frame was preferred by the majority; a few preferred a deeper frame. Drone foundation for sections was quite generally disliked. Adjourned.

At 7 p. m., the meeting was called to order by Mr. Cutting; the President, Mr. Gilbert, being obliged to go home at the close of the afternoon session, had requested Mr. Cutting to fill his place, when we were favored by a piece of music by the College Glee Club.

In reply to the question, "What are the best plants for honey," Dr. Mason said he preferred sweet clover; would sow it on waste places, not by the roadside, neither did he think it would pay to put it on land worth \$100 per acre for agricultural purposes. When both honey and forage were desired, alsike clover was recommended.

The committee on exhibits reported on the articles on exhibition.

After a piece of music by the Club, action was taken in regard to removing the danger of foul brood in the vicinity of Adrian, the President appointed Messrs. F. W. Gilbert, D. G. Edmiston, C. J. F. Howes, E. S. Townsend and A. M. Gander, as a committee to see the authorities in regard to eradicating the evil.

The following resolution was then adopted:

Resolved, By the Southeastern Michigan Bee-Keepers' Association, in Convention assembled at Adrian, Jan. 23, 1884, that this Association considers foul brood to be a very dangerous and extremely contagious disease, and that we advise all to be careful in experimenting in regard to its cure. If but two or three colonies are afflicted in any apiary, we earnestly advise total destruction of hives and contents, for we consider the risk of trying to cure two or three, greater than their value.

Individual reports are summarized as follows:

Colonies in the spring of 1883	534
" " fall "	652
Pounds of Extracted Honey	4245
" Comb "	9847
Average yield per colony, spring count, pounds	26 1/4
Pounds of Beeswax	328
Queens sold	128

A vote of thanks was extended to the Glee Club for their fine music; also, to the committee of arrangements for making the meeting successful and interesting. After another song by the Glee Club, the meeting adjourned.

Please excuse the delay in sending this report, caused by circumstances beyond my control.

A. M. GANDER, Sec.

For the American Bee Journal.

Bee Diarrhoea—Its Cause.

H. C. WHITLOW.

As I am somewhat interested, with many others, in trying to find out the cause of bee diarrhoea, I will give some facts. I have 28 colonies on the summer stands, well packed in dry sawdust, all but two, which were kept without packing. Sometime ago they had a flight, and the two that were not protected showed signs of diarrhoea. The snow and covers of the hives were spotted with brownish discharges. A friend of mine (Dr. Miller) noticing the same, concluded to help me find out something in regard to the cause.

The Doctor has worked with the microscope for several years, and the facts that I shall give were developed with that instrument. In the first place, bees that had been dead 24 or 48 hours were taken, and the yellow brown matter (the same that is discharged by the live bees before death) was mixed with matter to clarify it, and when submitted to examination under the microscope, a mass of pollen grains could be plainly seen. Most of the pollen grains are so perfect that the class of plants from which they came can be identified. The contents of the bodies of many dead bees were examined carefully, and in every instance this yellowish-brown mass was pollen, and sometimes mingled with honey.

The fact that all the bees were full of this pollen, and that being in a state of partial decomposition and undigested, strongly points to the conclusion that pollen is the primary cause of the disease. It is also very

singular that bees should eat a substance that will prove so destructive, especially when they are well-supplied with honey.

North Manchester, Ind.

For the American Bee Journal.

Planting for Bee-Pasturage, etc.

LEONIDAS CARSON.

From the first of February to the evening of the 27th, we had fine, open spring weather, and bees that were on their summer stands could fly almost every day. On the evening of Feb. 27, we were struck by the cold wave that came down from the west, and ever since we have had cold winter again, the ground being frozen and covered with snow.

Bees, as far as I can learn, appear to be in fine condition. I left 14 colonies of my bees on their summer stands, and lost two through the month of January; the others are in fine condition. I set 67 colonies in my winter depository. They appear to be in good condition up to this date, March 4th.

On page 139 L. K. Dickey, of High Point, Ga., enquires why enterprising bee-keepers of the North, who are seeking a better field for their business, do not go to Northwest Georgia and help develop the honey resources? The answer is plain. Enterprising men of all occupations at the North, are loth to settle in the Southern States so long as lawlessness is excused and goes unpunished. I have reference to the trouble at Danville, Miss., last fall. I have long had my eye Southward. I have traveled over many of your pleasant hills and vallies. You are blest with the finest climate in the world. Many of your States would be the paradise of the bee-keeper.

I am pleased to see that bee keepers are becoming awake on the subject of foul brood. I do not know of any in this county, but if bee-keepers continue to procure queens from abroad, how long will it be until we have it here too? Why do not the State Associations see that there are similar laws enacted in every state in the Union, to the one they have in Mich.? It is to the interest of every bee-keeper in the land.

I am very much interested in pasturage for bees, and I would like to impress on bee-keepers the necessity of a continual honey flow all summer. If we are not so situated, we should not suffer another spring to pass without considerable effort on our part. After fruit bloom, comes the wild cherry with its abundance of bloom, and if the weather is favorable, our pets gather considerable fine honey; but if the weather is cold and wet, bees can do nothing until white clover. I would admonish bee-keepers to set out cuttings of the golden willow, and plant the black or common locust, plant basswood or linden. Do not forget to set out a nice patch of raspberries; for black caps, plant the Tyler & Sonhegan for early, and Gregg for late; of the reds, plant Hansell, or crimson beauty, for early; and

Cuthbert, for late, and you will not only secure a fine lot of raspberry honey, but plenty of fine berries. I have yet to see the man, woman or child that do not love raspberries. After raspberries, plant the blackberry; the hardiest blackberry is the Snyder; Taylor's prolific is fine, and is some larger than the Snyder.

It is claimed that the box-elder and catalpa are profuse bloomers, and yield considerable honey. The clovers all yield honey, and are all good forage plants, unless it is melilot, and I have seen cattle eat melilot clover, when it was young, with great relish.

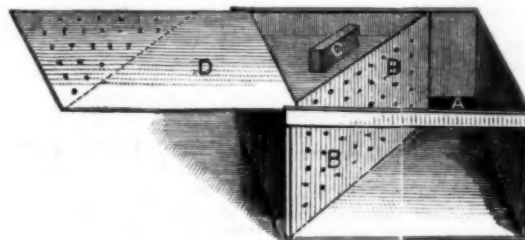
Diamond, O., March 4, 1884.

For the American Bee Journal.

Swarm Controller.

JOHN LONGMATE.

In accordance with my promise I now give a description of my swarm controller and queen and drone trap. By reference to the engraving, the reader will see that it is a box about 12 inches long, 6 wide, and 6 high,



Swarm Controller and Drone and Queen Trap.

A, Entrance. B, Perforated Zinc for egress of Workers. C, Tube of Wire Cloth for Queen and Drones to pass into upper room. D, Zinc cover slid back to show inside of Trap.

having the front side open to within $1\frac{1}{2}$ inches of the top. From the left-hand front corner to within 2 inches of the opposite corner, is a plate of zinc perforated from the inside.

The back side of the box is open along the bottom up to the second floor, to let the bees pass freely from the hive into the box. When the bees pass into it, they are directed by the angling side to the right, and the workers pass out through the holes near the corner and make their escape. The queen and drones cannot pass these holes, and are attracted by the light from above and pass up through a tube into the upper room, and are there confined. The workers that find their way into the upper room, pass out through the perforated side. When the workers return from the fields, they naturally alight at the point of egress, and in their laden and distended condition cannot pass readily through the holes, having the rough edges outward, and are directed by the angling front to the right and to the lower corner through a tube of ample size for the heavy-laden workers to pass readily into the hive. This tube reaches about 3 inches into the hive, where it is comparatively dark, and as the queen and drones are at-

tracted by the light at the large passage way, they pass out that way, and do not find the end of the tube; and if they should, the force of the incoming workers would turn them away from it, and they are compelled to pass into the box.

This attachment can be made very useful in many ways, some of which I will mention: When we wish to reduce the number of drones in a hive, we place the trap at the entrance, and in the latter part of the day, when the drones have attempted to fly out, we find them in the trap, and can destroy them. Or, if we wish to use them for any purpose, we can easily catch them in this manner.

When a swarm issues, the workers pass out, then quietly step to the hive and be ready for their return, for it will be only a few minutes before they will be rushing back. Look into the queen cage, to be sure that the queen is there. Now move the old hive to a new stand, and place a new one on the old stand, and when the swarm returns, draw back the sliding floor between the upper and lower rooms, and cover the cage to darken it, and

let the queen pass back into the hive, and the large swarm, perhaps with a valuable queen that we were so fearful might go to the woods, are nicely located in their new home. Let the controller remain at the hive for a few days, or until there is no danger of the swarm re-issuing.

When we have after-swarms, and the controller is used, we can ascertain if there is more than one queen, return the one of our choice and utilize or destroy the others, and our swarm is returned to the old hive with no further trouble. If the division floor is left out, and the swarm issues in our absence, it and the queen are returned to the old hive without any attention.

It is not intended to prevent swarming, but to control it. I agree with Mr. Chas. Dadant in his article on page 57, that swarming can be prevented, or nearly so by proper management, but when we do not prevent it by this previous management, either by design or failure, then we should control the swarms, and I am of the opinion that it is best to have the first swarms in new hives, and if that had been done, and they had not been returned, the "ill-treatment" of the queens would not have occurred.

Mating queens in confinement, I believe, has thus far been a failure, and we must look in some other direction for a means of controlling that matter. When we wish to improve the blood of our flocks and herds, we confine the males that we do not wish to mate, and let those of our choice run with the females. With this attachment to our hives, we can confine the impure drones and let those that are pure fly with the queens. This controller can be made of tin at any tin shop at a small cost. I make them partly of wood. I form a box of thin boards 12x6x6 inches, letting the sides project above the ends with grooves in which to slide this cover. The front is 1½ inches wide; the back 4 inches, with a groove 3 inches from the top. Two inches from the right hand corner, on the inside, tack a perpendicular strip. From this strip to the left hand front corner, slide in a piece of zinc perforated from the inside, with holes 9-64 of an inch in diameter. The left end should be in two pieces, and put together with an opening corresponding with the groove in the back. Through this opening, slide in a triangular piece of tin or wood with a notch in the side next to the perforated zinc 3x¾ inches, for the queen to pass into the upper room. Over this opening, and attached to the zinc, form a wire cloth tube reaching to within ¼ of an inch of the top, having the opening about ¼ of an inch wide. Slide in on the top a piece of glass or perforated zinc for a cover.

At the right hand corner form a tin tube reaching into the entrance of the hive about 3 inches, with the inside opening 2x¼ inches.

Farmer City, Ill.

For the American Bee Journal.

How to Settle the Pollen Theory.

H. O. MORRIS.

I have several times read that by closing up a hive of bees so that they could not escape, at the same time giving them ventilation and sunlight, the bees would have the dysentery in three or four days, even in summer. I think I have read of some other ways of giving them this disease in a short time. If anybody knows of other means that will surely bring it about, I wish they would report.

My proposition is this: Take 4 colonies of bees in normal condition. No. 1 to have plenty of honey and pollen, No. 2 to have honey and no pollen, No. 3 to have sugar syrup and pollen, and No. 4 to have syrup and no pollen. Treat these all alike, with the conditions necessary to produce dysentery. If the colonies that are provided with pollen have the dysentery and the others do not, we will have evidence that is conclusive, much more so than the winter test; for in some seasons and in some places bees are not affected with it at all. I will make this test next summer and report, and hope others will do the same.

Tiskilwa, Ill.

For the American Bee Journal.

Marshall County, Iowa, Convention.

The Marshall County, Iowa, Bee-Keepers' Association, met at the Court House, in Marshalltown, Feb. 2. Five new members were admitted.

The subject for discussion, "Promotion of Bee-Keeping," was taken up, and well discussed by several members, and, we believe, benefitted all present.

On the subject of "Fair Exhibitions," all desired to have a chance to make a better display of bees and honey products, and the Secretary was appointed to confer with the officers of the Marshall County Agricultural Society, and see what arrangements could be made for the fair of 1884.

It was decided that the election of officers for the coming year, should take place at the next regular meeting, April 5. Subjects for discussion at the next meeting: "Spring and Summer Care," and "Profits of Bee-Keeping."

The Society then adjourned to meet Saturday, April 5, at 10.30 a. m., at the Court House in Marshalltown, Iowa. Bee-keepers of adjoining counties interested in bee-keeping, are invited.

J. W. SANDERS, Sec.

Convention Notices.

The Wabash County bee-keepers intend to organize a county association on Friday, April 11, 1884, at 10 a. m., at the Court House in Wabash, Ind. All bee-keepers of this and adjoining counties are requested to meet with us.

H. CRIFE.

There will be a meeting of the Kansas Central Bee-Keepers' Association at the Grange Hall in Manhattan on April 5, 1884. The following papers have been secured: "Forage plants for bees," by Thomas Bassler, K. S. A. C.; "Pleasures and dangers of bee-keeping," by Robert Corbet, of Manhattan; "Ancient and Modern bee-keeping contrasted," by S. B. Kokanour, of Manhattan, and a paper by Aug. L. Entsminger, of Silver Lake, Kans. There will be election of officers, etc.

THOMAS BASSLER, Sec.

The Union Bee-Keepers' Association of Western Iowa, will meet at the Emmett house, in Dexter, on Saturday, March 29, at 10 a. m. sharp. All who are interested in apiculture are invited to attend.

M. E. DARBY, Sec.

W. B. KENYON, Pres.

The Western Bee-Keepers' Association will meet at Independence, Mo., Thursday, April 24, 1884.

C. M. CRANDALL, Sec.

The Western Michigan bee-keepers, will hold their spring meeting at Berlin, on April 24.

F. S. COVEY, Sec.

The Progressive Bee-Keepers' Association will meet for their spring meeting May 3, 1884, at the apiary and residence of J. B. Haines, Bedford, Cuyhoga County, O. All interested are invited.

J. R. REED, Sec.

The next meeting of the Bee-Keepers' Association of Central Illinois, will be held in the office of the County surveyor, in Bloomington, on Wednesday April 9.

W. B. LAWRENCE, Sec.

The sixth annual convention of Texas bee-keepers will be held at the "Bee Garden" of Judge W. H. Andrews at McKinney, Collin Co., Tex., on April 24 and 25, 1884. A larger number of leading bee masters than ever assembled on a similar occasion in the South, is anticipated.

WM. R. HOWARD, Sec.

Kingston, Tex., Jan. 16, 1884.

The fourth semi-annual meeting of the Western bee-keepers will be held at Independence, Mo., April 24 and 25, 1884. This will be the most interesting convention of bee-keepers ever held in the West. The association numbers among its members some of the most successful bee-keepers in the country, and many outside the association, from abroad, will be here to take part in the discussions. Let each one come prepared to take part in the discussions, and bring something to exhibit. The programme, when completed, will comprise all the interesting subjects of the day. The committee appointed at our last meeting on "marketing honey," will report the first day, and it will be of great interest, for the committee is composed of thorough men who have given the subject a large amount of attention since our last meeting. Jerome Twichell, of Kansas City, has kindly consented to address the convention on the subject of "Preparing honey for market."

C. M. CRANDALL, Sec.

Independence, Mo.

H. SCOVELL, Pres. Columbus, Kans.

We will organize a bee-keepers' association at the Court House in Franklin, Ind., at 10 a. m., April 5, 1884. All bee-keepers are invited to attend and take part in the organization.

L. R. JACKSON.

Urmeyville, Ind., Feb. 26, 1884.

The Lorain County Bee-Keepers' Association, will meet at Elyria, O., Wednesday, April 9, 1884.

O. J. TERRELL, Sec.

North Ridgeville, O.

The Mahoning Valley bee-keepers will hold their next meeting in the Town Hall at Newton Falls, O., on Thursday, April 10, 1884, at 10 a. m.

E. W. TURNER, Sec.

L. CARSON, Pres.

We can supply photographs of Rev. L. L. Langstroth, the Baron of Berlepsch, or Dzierzon, at 25 cts. each.

Local Convention Directory.

1884. Time and place of Meeting.

- Mar. 29.—Union Association, at Dexter, Iowa.
M. E. Darby, Sec., Dexter, Iowa.
- April 5.—Marshall Co. Iowa, at Marshalltown.
J. W. Sanders, Sec.
- April 5.—Kansas Central, at Manhattan.
Thomas Bassler, Sec.
- April 9.—Ass'n of Central Ill., at Bloomington.
W. B. Lawrence, Sec.
- April 9.—Lorain Co., at Elvira, O.
O. J. Terrell Sec., North Ridgeville, O.
- April 10.—Mahoning Valley, at Newton Falls, O.
E. W. Turner, Sec.
- April 12.—Texas Central, at Waco.
I. W. Grayton, Sec.
- April 18.—Iowa Central, at Winterset, Iowa.
J. E. Pryor, Sec.
- April 22.—Des Moines Co., at Middleton, Iowa.
John Nau, Sec.
- April 24.—Western Michigan, at Berlin.
F. S. Covey, Sec.
- April 24, 25.—Western, at Independence, Mo.
C. M. Crandall, Sec.
- April 24, 25.—Texas State, at McKinney.
W. R. Howard, Sec.
- May 3.—Progressive, at Bedford, O.
J. R. Reed, Sec.
- May 6.—Southern Wisconsin, at Janesville.
J. T. Pomeroy, Sec.
- May 26.—Will County, at Monee, Ill.
P. P. Nelson, Sec.
- Oct. 11, 12.—Northern Mich., at Alma, Mich.
F. A. Palmer, Sec., McBride, Mich.
- Oct. 15, 16.—Northwestern, at Chicago, Ill.
W. Z. Hutchinson, Sec.
- Dec. 10, 11.—Michigan State, at Lansing.
H. D. Cutting, Sec., Clinton, Mich.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

SELECTIONS FROM
OUR LETTER BOX

Bees in Excellent Condition.

I commenced the spring of 1883 with 20 colonies of Italian and hybrid bees, and took from them, during the season, over a ton of honey. I use the Langstroth hive exclusively. I use comb foundation in the sections, and find it pays. I would have it, if it cost \$1.50 per pound. I prefer that which runs about 10 feet to the pound. I can see no difference in the flat or natural bottom; my bees take as well to the one as to the other. I have now 30 colonies, and hope to get at least 3,000 lbs. of honey. C. E. CANOLES.

Hereford, Md., March 14, 1884.

Bees Wintering Fairly.

Our bees seem to be in more than average good condition for this date. We are anxiously looking forward to the final result of our carefully prepared experiments with the wintering problem. I have already seen enough in past years to convince me that Bro. Pond is clear off the track on the cause of spring dwindling. I will give my views on that subject, and reply to Dr. Tinker's last article, when giving in my wintering report for 1884. The Doctor seems as far astray as Bro. Pond. The Doctor's effort to answer that report before it comes to light, is "taking time by the front forelock." Our test will be clear of any such errors as the Doctor mentions. Bees do not keep warmer with sugar than with honey; they just eat considerable less of it, that is

all. The thermometers shows no difference. We will try to make it all clear to the Doctor. Our report may be a frank admission of a big mistake; we shall see, and report facts just as they appear, and "let the chips fall where they may." JAMES HEDDON.

Dowagiac, Mich., March 19, 1884.

Why Eat Honey?

DEAR EDITOR:—I have received the sample of Leaflet No. 1, entitled, "Why Eat Honey?" I think that bee-keepers owe you a vote of thanks and liberal patronage for your endeavors to create a market for honey. The get-up of the Leaflet is good, and I think they will do a great deal toward correcting the ideas of consumers of honey. In general they have no idea of the perfection of methods of bee-culture, and if they have any knowledge of the business whatever, it is of management with the old-fashion way with box hives. In view of this, it is not strange that when people are told that we can take honey from the comb and return them to the hive to be filled again, that they should ask with evident distrust, how we are going to put our combs back in the hive and have them filled again? Would it not be well to explain in the Leaflets, that with the methods in modern bee-culture we compel the bees to build their combs straight in sectional frames, and that these sections can be removed from the hive in an instant, the bees brushed off, the honey extracted, and the combs returned to the hive to be again filled, etc.

W. N. HOWARD.

Derby, Vt., March 19, 1884.

[Yes; we will elaborate a little on that idea—though we mentioned it briefly in the Leaflet.—Ed.]

My Feeder.

I wish to describe the feeder I use, and think among the best. It is a common brood frame, from the top $3\frac{1}{2}$ inches down, is placed a second triangular comb guide, then on each side is fastened picture-back material, reaching within $\frac{3}{8}$ of an inch of the top triangular guide. This is fastened in paint, and beeswax is run along each side of the lower comb guide. This makes a feeder 3 inches deep and $\frac{5}{8}$ inches wide, and as long as the frame. Near one end, through the top-bar, is made a half-inch hole; this hole is placed at the back of the hive (put comb foundation in below the lower guide, or see that the bees build worker comb there), cover with a quilt of single thickness first, cut through this quilt into $\frac{1}{2}$ inch hole a straight slit $\frac{1}{2}$ inch long; have a small funnel made that will go through this hole into the feeder. I use an old teapot to pour the feed into the funnel; and it will surprise one at the short time it will take to feed 50 or 100 colonies, and that, too, without seeing a bee. The holes will close up after the funnel is removed, keeping every bee below. Keep this frame in the middle of the hive, especially in the fall, winter and spring. In the summer it can be moved next to one side of the

hive. This feeder is practicable, if made right; if more than $\frac{3}{8}$ inch space at the top is left, comb will be built into it, but it must be left in the hive, as it cannot be easily removed on account of the bees that are always in it; but, if it must be removed, shake the bees to one end; then with a quick downward motion, the bees will slide out, each side of the upper comb guide (which is better than a flat surface for them to strike against). A lot of loose feeders lying around are a nuisance; these are always in the hives, out of the way, and just where you want them for use.

Medford, Minn. J. E. CADY.

Cyprians, Syrians and Italians.

I put into winter quarters 53 colonies of Italians, Cyprians, Syrians, Albinos and a few hybrids. I have nearly all in double-walled chaff hives, and a few are in single-walled hives. I give these some protection by packing leaves around the outside. I have one in the American double-walled hive. It is a two-story hive in summer, and a double-walled hive in winter. It has nine frames 12x12. It is a good hive. The rest of my bees are all on Simplicity frames, $9\frac{1}{2}$ x17 $\frac{1}{2}$, outside measure. For six years I have wintered all my bees out-of-doors. This winter I have yet lost none. I find that Italians crossed by Cyprians or Syrians are good honey gatherers. Syrians and Cyprians excel the Italians for gathering honey, but they are very cross. I prefer bees or queens that are kept where the different races are kept in one apiary. I think they are worth nearly one-third more.

OTTO KLEINOW.

Detroit, Mich., March 20, 1884.

Preparing Bees for Winter.

As we have just wintered about 40 colonies of bees on the summer stands, and without the loss of a single one, we will explain the manner in which we prepared them. In the first place, we pay little attention as to whether the combs contain pollen or not, but see that each hive has 20 pounds of honey, at the least, and if more, all the better. We use the 10-frame Langstroth hive, and remove a frame from each side, leaving eight; in the place of the frames removed, division-boards are inserted, and over the frames sticks are placed, in order to allow the bees to pass to all parts of the hive; for the same purpose a hole is cut through the centre of each comb remaining in the hive. We now place a coffee sack over the frames, and fill the remaining space in the upper story with corn shucks, which absorb the moisture, and give freer ventilation. Keep the hives and combs dryer than anything we have yet tried. So long as our bees are dry, warm, and have plenty of good honey (or a syrup made from the best quality of sugar will, perhaps, answer as well), we can defy the severest winter. Our prospects here for a crop of honey is good, but it mainly depends upon the management between now and the harvest.

A. E. FOSTER.

Covington, Ky., March 20, 1884.

Educate the Customers.

Leaflet No. 1 is received, and I pronounce it very good. I think it will be a great help to many, situated as I am, among people totally ignorant of the improved methods in bee-culture, which includes about nine-tenths of the country people. Why, I have those who keep bees in the "go-as-you-please" way, come for me to go and extract from box hives and log gums, and when told that it is necessary to have movable frame hives in order to extract the honey, they look amazed, and when shown comb foundation, they look as if they would have the lock-jaw.

S. SMITH.

Neoga, Ill., March 20, 1884.

Four Per Cent. of Loss in Winter.

Last fall I packed 100 colonies of bees on the summer stands, with planer shavings and chaff. They flew quite freely to-day, for the first time since winter set in. They were confined to the hives 98 days, and some of them were badly affected with diarrhoea. The loss thus far is 4 per cent. Colonies on new combs are wintering much the best, which I noticed was also the case last winter. The bees in my cellar are quiet.

W. D. WRIGHT.

Knowersville, N. Y., March 13, 1884.

Iced Entrances.

It is too early to report yet, but some in this section are losing bees pretty lively. Diarrhoea appears to be the trouble; also smothering, from ice accumulating in the hives. Mine are still in the cellar, and most of them appear to be doing finely, but more about them later, after I see just how they come out.

M. BAILEY.

Winterset, Iowa, March 12, 1884.

Successful Beginners.

To-day our bees are flying; and some are gathering sap from the sugar maple. We commenced, last spring, with 6 colonies in box hives. We had never used frame hives, and, therefore, nearly everything was new to us. Having the BEE JOURNAL and Cook's Manual we made fast progress, and after a bee-keeper had shown us how to transfer a colony, we transferred the rest without any trouble, and also several for neighbors. We increased to 15, and got over 200 lbs. of honey, most of it in one-pound sections; the rest extracted. Nearly all of our honey was from linden. We got none from white clover. Our comb honey sold for 22 cents per pound, and the extracted for 15 cents. Our colonies brought us about \$20 each, spring count, which, I think, is excellent for the first year. We planted a piece of mignonette about 30 feet square; the bees worked on it early and late, till frost. We intend planting more extensively the coming year. I have seen remedies for bee stings in the BEE JOURNAL, and have used many different ones, but the best was common salt and water immediately applied to the wound. We have Italianized about half of our

colonies, and expect to Italianize the rest in the spring. We intend to work for extracted honey in the future, and build up a home market for it. We use a frame $9\frac{1}{2} \times 13\frac{1}{2}$ inches, outside measurement, and prefer it to all others for our use; it will work crosswise in a Simplicity body; we call it the Crosswise Langstroth frame. Quite a number of bee-keepers in this part of the State use it, and like it better than others.

H. D. GATES & SON.

Gerry, N. Y., March 18, 1884.

Hard on Bees.

My 57 colonies of bees wintered on the summer stands very well until the last blizzard, which caused the brood to be almost entirely destroyed, which will be a very heavy loss to all who have bees in this section of Northern Kentucky. Success to the BEE JOURNAL. May it outlive all the adulterators of sweets, so that pure honey will be one of the staples of this country.

WM. G. GOSNEY.

De Mossville, Ky., March 14, 1884.

Feeding in Winter.

I have read quite a little about feeding bees in cold weather, so last fall I thought I would try and feed 2 colonies all winter. Late in October, I put all my bees in winter quarters; these 2 with the rest. The latter had less than 3 lbs. of honey each. I put on a Nellis feeder; it will hold about 2 quarts; I filled it once in October, and have fed them every month since, and they are, to-day, in as fine condition as you could wish to see. The food was granulated sugar, about as thick as thin honey. They have to leave the cluster and come up about 4 inches to get the food. I only feed them when it is warm enough for them to fly; then pour it in quite hot. The feeder is very easily made, and I like it better than any I have had yet. I have kept bees 7 years; have always wintered on the summer stands; never lost any until this winter, when I lost one with dysentery. The rest are all right so far. I thought, perhaps, this might be a help to some that would like to feed.

D. S. BASSETT.

Farnumsville, Mass., March 18, 1884.

White Clover Not Winter-Killed.

The weather has been very fine here for the past two days, and the bees are making good use of it, seeming glad to get out once more, after their long confinement. Much to my surprise they were carrying in pollen quite freely this afternoon, but what they gather it from is a puzzle to me, for there are no trees in bud or bloom yet. I have a row of very large maples on the east side of my place, and the severe freezing weather of the past winter has cracked them open pretty badly; the sap is now oozing out freely, and running down the bodies of the trees. These places are literally covered with bees sipping the sap; the little fellows do not wait for something better to turn up—as human

beings sometimes do, but pitch into the first thing that has any sweetness about it, and work at it with a will while it lasts, and then when the better does come, they can enjoy that all the more. The past winter has been a very severe one, on bees that were left on the summer stands, but owing to the good quality and quantity of well capped honey, and being strong in numbers, and mostly all young bees bred late in the fall, they have come through in good condition, with but very few losses, in this section, although the thermometer stood away below zero most of the time, and on Jan. 5, it was 32° below. The white clover has not been winter-killed, and looks very promising up to date.

E. ARMSTRONG.

Jerseyville, Ill., March 13, 1884.

Honey and Beeswax Market.

OFFICE OF THE AMERICAN BEE JOURNAL,
Monday, 10 a. m., March 17, 1884.

The following are the latest quotations for honey and beeswax received up to this hour:

CINCINNATI.

HONEY—There is no life in the market. Extracted honey sells in its regular way and to its wonted channels, without any speculative feeling about it, and brings 7@10c on arrival. Comb honey sells slow at 15@16c a lb. from store for choice.

BEESWAX—Is in good demand; choice yellow brings 35c a lb. on arrival.

CHAS. F. MUTH.

NEW YORK.

HONEY—White clover and basswood in 1 and 2 lb. sections, 17@18c. Dark and second quality, 15c; extracted white clover in kegs and barrels, 9@10c.

BEESWAX—Prime yellow, 34@35c.

H. K. & F. B. THURBER & CO.

CHICAGO.

HONEY—Of late receipts of comb honey has been scattered amongst many firms, and as all are desirous of realizing on their receipts at as early a day as possible, prices have been irregular and low, some lots being offered from 5c to 7c per lb., less than 30 days ago. I quote white comb 13@16c; fancy 18c. Extracted honey—demand light, at 7@9c.

BEESWAX—30@37c.

R. A. BURNETT, 161 South Water St.

KANSAS CITY.

HONEY—Demand for comb honey good, and stocks reduced quite low. The recent concessions in prices have brought orders in quite freely. Choice white 1 and 2 lb. sections, 16@17c. Extracted in better demand, at 8@10c.

BEESWAX—None in this market.

JEROME TWICHELL, 514 Walnut Street.

SAN FRANCISCO.

HONEY—Stocks are mostly of fair to medium quality. There is very little inquiry. Prices are nominally unchanged, but the undertone of the market is weak. White to extra white comb, 15@18c; dark to good, 10@13c; extracted, choice to extra white, 7@8c; dark and candied, 5@—

BEESWAX—Wholesale, 27@30c.

STEARNS & SMITH, 425 Front Street.

ST. LOUIS.

HONEY—Steady; demand and supply both small. Comb, 12@16c per lb., and strained and extracted 10@15c.

BEESWAX—Firm at 33@33½c. for choice.

W. T. ANDERSON & CO., 104 N. 3d Street.

CLEVELAND.

HONEY—The honey market is improving a little; are selling first-class 1 lb. sections quite readily at 18c, with an occasional sale at 19c; 2 lb. is not quite so active, at 17c. Second quality is dull at 15c. Extracted not wanted.

BEESWAX—35c, but very scarce.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Demand light. 1 lb. sections comb honey, 18@20c; 2 lb. 16@18c. Extracted, 9@11c.

BEESWAX—35c.

BLAKE & RIPLEY, 57 Chatham Street.

Special Notices.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks. American Express money orders for \$5, or less, can be obtained for 5 cents.

We wish to impress upon every one the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address we already have on our books.

When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but on separate pieces of paper.

It must be understood that, should an advertiser desire to cancel an unexpired contract, he can do so only by paying regular rates for the number of insertions his advertisement has had.

All money orders from foreign countries, should be made payable at Chicago, as the "Madison Street Station" is not an International office.

In reply to many correspondents let us say that we take any kind of postage stamps at their face value—including the 3 cent ones. Silver should never be sent by mail, as it endangers the loss of the letter either by thieves, or else breaks through the envelope and is lost in that way.

We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Subscription Credits.—We do not acknowledge receipt of each subscription by letter. The label on your paper, or on the wrapper, shows the date to which your subscription is paid. When you send us money, if the proper credit is not given you, within two weeks thereafter, on your label, notify us by postal card. Do not wait for months or years, and then claim a mistake. The subscription is paid to the end of the month indicated on the wrapper-label. This gives a continual statement of account.

GETTING UP CLUBS.

To increase the number of readers of the BEE JOURNAL, we believe, will aid progressive bee-culture and help to elevate the pursuit. We, therefore, offer the following premiums for getting up clubs:

While no subscription to the BEE JOURNAL will be taken for less than the regular advertised prices (viz.: Weekly, \$2.00; Monthly, \$1.00),—any one getting up a club of two copies, or more, may select from "OUR BOOK LIST" anything therein named, to the amount of 15 cents for every dollar they send direct to this office, to pay them for the trouble of getting up the club; and these books will be sent, postpaid, to any address desired.

For a club of 3 Weekly or 6 Monthly and \$6.00, we will make an additional present of a Pocket Dictionary, bound in cloth, containing 320 pages.

For a club of 5 Weekly or 10 Monthly, (or a mixed club of both,) with \$10, we will, in addition to the 15 per cent, present a copy of the AMERICAN "POPULAR" DICTIONARY, comprising every word in the English language that enters into speech or writing; it contains 32,000 words and phrases, 670 illustrations and 512 pages; it is nicely bound in cloth, and will be sent by mail, postpaid, to any address desired.

Subscriptions for two or more years for one person, will count the same as each year for a different person.

Apiary Register—New Edition.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it. The prices will hereafter be as follows:

For 50 colonies (120 pages).....\$1 00
" 100 colonies (220 pages)..... 1 25
" 200 colonies (420 pages)..... 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Dzierzon's new work entitled "Rational Bee-Keeping," we now club with the BEE JOURNAL as follows: The Weekly for one year and the book, bound in cloth, for \$3, or in paper covers for \$2.75. The Monthly BEE JOURNAL and the book, \$1 less than the above prices. It is an imported book, printed in the English language, and the price of the book is \$1.50 bound in paper covers, or \$2.00 when bound in cloth.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

Honey as Food and Medicine.

A pamphlet of 16 pages giving Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price still lower, to encourage bee-keepers to scatter them far and wide. Single copy 5 cents, postpaid; per dozen, 40 cents; per hundred, \$2.50. 500 will be sent postpaid for \$10.00; or 1000 for \$15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

We are now preparing a new book for the pocket, to be called "The Bee-Keepers' Convention Assistant." It will contain a copy of a model "Constitution and By-Laws" for the formation of Societies for Bee-Keepers—a simplified manual of Parliamentary Law and Rules of Order for the guidance of officers as well as members, a blank form for making reports for statistical information—and much other useful matter for those who attend Conventions. One of the latter will be a suitable Programme of questions for discussion at such meetings, model Premium Lists for Fairs which may be contracted or enlarged, and then recommended to the managers of adjacent County or District Fairs; a few blank leaves for jotting down interesting facts, etc. We shall aim to make it suitable for any locality, and a book that will commend itself to every bee-keeper in the English-speaking world. It will be of a size suitable for the pocket, nicely bound in cloth, and the price will probably be 50 cents.

Do not let your numbers of the BEE JOURNAL for 1884 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Constitutions and By-Laws for local Associations \$2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Sample Copies of the AMERICAN BEE JOURNAL will be sent free to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

HONEY EXTRACTORS!

20 per cent. discount on all orders received for the next 30 days on Honey Extractors of the most improved designs. Bokhara Clover Seed, 20 cts. per pound. Extracted Honey Wanted.

EDMUND J. BERRY,

13A1t BROME CORNERS, QUE, CANADA.

WANTED—A young man of some experience in Bee-Keeping to work in the apiary. Reference required. Address, stating age, experience, and wages wanted, W. D. WRIGHT, Knowersville, Alb. co, N. Y.

13A1t

PLEASE SEND FOR MY PRICE LIST Of Langstroth Hives, Sections and Supplies in general, before buying your supplies for 1884.

HENRY CRIPE, N. Manchester, Ind.
13A2t

100 COLONIES OF Bees For Sale

They are in Langstroth hives, one or two story. The Bees are Italian, Arkansas Brown, Cyprian and Hybrids—the best honey-bees in the world. Price \$3 per colony, at the apiary. Safe arrival guaranteed.

GEO. B. PETERS,

13A1t PETERS P. O., Lee Co. ARK.

FOR 1884, ITALIAN AND CYPRIAN Bees and Queens For Sale in any shape and quantity. Address,

OTTO KLEINOW, DETROIT.

13A1t 4B1t Opposite Fort Wayne, Mich.

Everybody! "Prator's Quilting Attachment" fits any Machine and turns out a Bed Quilt in less than ninety minutes. Agents wanted. C. R. MITCHELL, Hawkinsville, Ga.
13A1t

HELP WANTED.—1 agent wanted in every place to sell our new goods. Big pay, 40 samples only 10c. Maps free. Cut this out. Acme Novelty Co., Clintonville, Conn.
13A8t

I WANT TO SELL

Being unable to keep my apiary in the city for want of room, I offer the same **For Sale Cheap.** It consists of about 60 colonies of Italian Bees. Hives are mostly one-story chaff, with top for surplus. Langstroth frames 17"x9". All Combs built on heavy Foundation; 200 surplus Brood Combs, &c., &c.

JAMES URE, EAST SAGINAW, MICH.
13A1t

SPECIMEN BOOK
FREE.
GEO. M. GRAY & CO.
HONEY LABELS
MEDINA CO., OHIO.
ALL-PRINTING First Class. JOB-PRINTING of all kinds.

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

NEW Vegetables A Specialty.
GREGORY'S SEED CATALOGUE
1854-1884

All my Seed is warranted to be fresh and true to name, so far that should it prove otherwise, I agree to refill orders gratis. A large part of the great collection of Seed I offer is of my own growing. As the original introducer of Eclipse Beet, Burbank Potatoes, Marblehead Early Corn, the Hubbard Squash, and scores of other new Vegetables, I invite the patronage of the public. In the gardens and on the farms of those who plant my seed will be found my best advertisement. Catalogues **FREE** to all.

JAMES J. H. GREGORY, SEED GROWER, MARBLEHEAD, MASS.

FOR SALE CHEAP. BEES! BEES!

Having more Bees than I can well handle, I wish to sell 100 Colonies immediately. I use L. hive.
12A2t E. DRANE, EMINENCE, Henry Co. KY.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Italian Bees and Queens For Sale.

Tested Queens, May, \$3.00; June, \$2.50; after July 1, \$2.00 each. Untested, after June 1, \$1.00; 5 for \$5.40. Full colonies in May, \$7.00; 2 for \$13.00; 10 for \$60.00. After June 1, \$1.00 less each colony. Satisfaction guaranteed. L. S. CROWFOOT,
12A8t Hartford, Wis., April 1, 1884.

HELP WANTED,

To handle Bees this season. Address, with terms, etc., E. DRANE, EMINENCE, Henry Co. KY.
12A2t

ITALIAN QUEENS, DADANT FOUNDATION, and Supplies. It will pay you to send for Circular. E. F. SMITH, Smyrna, N. Y.
11A1t

Given's Foundation Press.

PUBLIC SENTIMENT affirms that the **PRESS** is **SUPERIOR** for making Comb Foundation either in Wired Frames or for SECTIONS, and insures straight and perfect combs, when drawn out by the bees. Send for Circular and samples.

D. S. GIVEN & CO.,
1A8t HOOPESTON, ILL.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Italian Bees and Queens For Sale!

Send 25 cents (one cent stamps) and get our Book on BEE-KEEPING.

Address E. P. BAKER,
10A8t Box 342, DES MOINES, IOWA.

Early Italian Queens!

IMPORTED AND HOME-BRED.

Nuclei and full colonies. Bees bred both for **BUSINESS** and **BEAUTY**. Dunham and Vandervort **FOUNDATION** a specialty. If you need Queens, Bees, Hives, Foundation or Supplies, send for my Catalogue and Price List. Address,

J. P. H. BROWN,

12A8t 4B4t AUGUSTA, GA.

ALLEY'S Drone Excluder, Queen & Drone Trap COMBINED.

Sample, by mail, 65c.; by express, 50c. In the flat, per dozen, including one made for model (13 in all) \$3.00. Send for our 23d annual Circular and Price List of Queens and four races of Bees. Bee-Keepers' Handy Book, bound in cloth, by mail, \$1.00.

HENRY ALLEY,
9A1t WENHAM, Essex Co. MASS.

BEE-KEEPERS, before ordering your APIARIAN SUPPLIES,

Send for our large Illustrated Catalogue, sent free to any address.

10A24t E. KRETCHMER, Coburg, Iowa.

Bees, Bees! and Eggs, Eggs!

One to 200 Colonies of Italian Bees For Sale.

1 to 10, at \$6.50 each; 10 or more, at \$6.00 each. Tested Queens after June 1, \$2.00 each. Also Eggs for hatching, from choice stock of White and Brown Leehorns, at \$1.50 per set of 13 Eggs. Send Card for Price List and reference. Address to **WM. LOSSING, HOKAH, Houston Co. MINN.**
10C3t

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List.

32A8t J. VANDERVORT, Lacyville, Pa.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The **BRITISH BEE JOURNAL** is NOW published **SEMI-MONTHLY**, at Seven Shillings, per annum, and contains the best practical information for the time being showing what to do, and when and, how to do it. **Rev. H. R. PEEL, Editor.**

We send the Weekly **AMERICAN BEE JOURNAL** and the **British Bee Journal**, both for \$3.50 a year.

65 ENGRAVINGS

THE HORSE,

BY B. J. KENDALL, M. D.

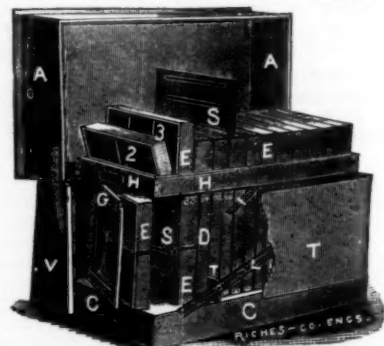
A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,

#25 West Madison Street, CHICAGO, ILL.

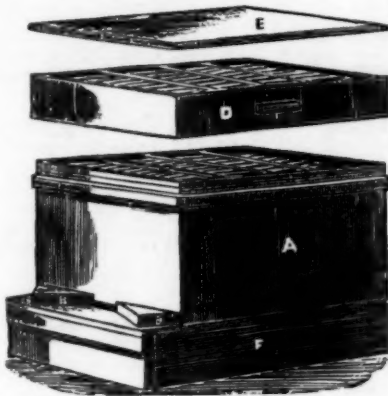
1876. CROWN 1882.



The best arranged **HIVE** for all purposes in existence. Took first premium at St. Louis Fair in 1882 and 1883 over all competitors. Descriptive Circular sent free to all on application.

Address, **ELVIN ARMSTRONG, Prop'r. of the Crown Bee Hive Factory and Apiary, JERSEYVILLE, ILL.**

1888. 1884.
HEDDON'S
COLUMN.



My New Langstroth Hive.

Thanking you for past years' patronage, I solicit what I may justly merit for the coming season. I am led to believe that the goods I offer, and my ways of doing business, give at least an average satisfaction, from the fact that my trade has more than doubled every year since I have dealt in supplies, and that nearly all of my former customers are customers still. True, we have had complaints, but we have more than 50 testimonials of best satisfaction, to every one such complaint.

I believe my Hive is growing in popularity, to a much greater degree, than is the business of bee-keeping. I am now prepared to furnish these hives made up, and in the flat, at very reasonable prices.

Given Comb Foundation, after having been thoroughly tested by many of our most experienced, most successful and most extensive bee-keepers, now stands, at least, second to none. I have on hand a large and choice stock of pure, domestic wax, together with improved facilities for making an article of that Foundation excelled by none.

SECTIONS.

I am now ready to furnish white all-Dovetail Sections as follows: $4\frac{1}{2} \times 4\frac{1}{2} \times 6$, 7 and 8 to the foot, per 1,000, \$6.50; $5 \times 6 \times 2$, per 1,000, \$8.00. All shipped from here.

STUDENTS OF APICULTURE

Will receive terms for 1884 on application.

BEES and QUEENS.

If you contemplate the purchase of Bees in any shape, tested or untested Queens, it may pay you to send for my

CIRCULAR for 1884

And be SURE to state whether or not you have my Circular for 1883.

Address,

JAMES HEDDON,
DOWAGIAC Cass County, MICH.

BEE-KEEPERS' SUPPLIES.

Send a postal card for my Illustrated Catalogue for 1884.

COMB FOUNDATION.

On account of the prevailing scarcity of beeswax, the price of comb foundation is now advanced **3 cents per pound** above the price quoted in my Catalogue for 1884.

BEESWAX.

I pay **32c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

CLOVER SEEDS!

The present prices are as follows:

White Clover, \$15.00 per bushel, \$4.00 per peck, or 30 cts. per pound.

Alsike Clover, \$12.00 per bushel, \$3.25 per peck, or 25 cts. per pound.

Sweet Clover, \$10.00 per bushel, \$2.75 per peck, or 20 cts. per pound.

NO. 30 TINNED WIRE

For Brood Frames.

One ounce spools, each, - 4 cents.

Postage, 2 cents extra.

One oz. spools, per dozen, 40 cents.

Postage, 13 cents extra.

One pound spools, each, 40 cents.

Postage 18 cents extra.

One pound will wire about 175 frames.

WIRE NAILS,

On account of a decline in the price of Wire Nails, I will make a discount of 15 per cent. from the prices quoted in my Catalogue, until further notice.

Vandervort Foundation Mill.

6 Inch, Price, \$25.00.

It makes the finest extra thin Foundation for comb honey. For Sale by

ALFRED H. NEWMAN,

923 West Madison Street,

CHICAGO, ILLINOIS.

American Linden or Basswood FOR BEES!

5 to 10 inches, per 100.....\$1.50.
3 to 5 feet, per 100.....7.00.

For sale by **Z. K. JEWETT, SPARTA, WIS.**
12A6t 4B2t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

DR. FOOTE'S HAND BOOK OF HEALTH,

HINTS AND READY RECIPES.

Is the title of a very valuable book that gives a great amount of information of the Utmost Importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.
It Costs only **TWENTY-FIVE CENTS**, and contains **28** pages, and is sent by mail, **post-paid, on receipt of price.** This is just the Book that every family should have.

IT TELLS ABOUT

What to Eat,
How to Eat it,
Things to Do,
Things to Avoid,
Perils of Summer,
How to Breathe,
Overheating Houses,
Ventilation,
Influence of Plants,
Occupation for Invalids,
Superfluous Hair,
Restoring the Drowned,
Preventing Near-Sightedness,
Parasites of the Skin,
Bathing—Best way,
Lungs & Lung Diseases,
How to Avoid them,
Clothing—what to Wear,
How much to Wear,
Contagious Diseases,
How to Avoid them,
Exercise,
Care of Teeth,
After-Dinner Naps,
Headache, cause & cure,
Malaria! Affections,
Croup—to Prevent.

IT TELLS HOW TO CURE

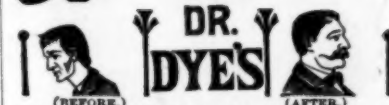
Black Eyes, Bolls, Burns, Chills, Cold Feet, Corns, Coughs, Cholera, Diarrhoea, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Irr. Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sunstroke, Stings and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

It will Save Doctor Bills!

Price only **25 Cents.** Sent by Mail, post-paid, by

THOMAS G. NEWMAN,
923 West Madison Street, CHICAGO, ILL.

30 DAYS' TRIAL



ELECTRO-VOLTAIC BELT and other **ELECTRIC APPLIANCES** are sent on **30 Days' Trial TO MEN ONLY, YOUNG OR OF D,** who are suffering from **NERVOUS DEBILITY, LOST VITALITY, WASTING WEAKNESSES,** and all those diseases of a **PERSONAL NATURE,** resulting from **ABUSES AND OTHER CAUSES.** Speedy relief and complete restoration to **HEALTH, VIGOR AND MANHOOD GUARANTEED.** Send at once for Illustrated Pamphlet free. Address
VOLTAIC BELT CO., Marshall, Mich.

6D1y

GOLD for the working class. Send 10 cents for postage, and we will mail you *free*, a royal, valuable box of sample goods that will put you in the way of making more money in a few days, than you ever thought possible at any business. Capital not required. We will start you. You can work all the time or in spare time only. The work is universally adapted to both sexes, young and old. You can easily earn from 50 cents to \$5 every evening. That all who want work may test the business, we make this unparalleled offer; to all who are not well satisfied, we will send \$1 to pay for the trouble of writing us. Full particulars, directions, etc., sent free. Fortunes will be made by those who give their whole time to the work. Great success absolutely sure. Don't delay. Start now. Address **STINSON & CO., Portland, Maine.**
4A1y

For Bees. Queens,

Honey, Foundation, Hives, Sections, and all Apian Implements, send for Circular to

FLANAGAN & ILLINSKI,
1AB1y Lock box 995, Belleville, St. Clair Co., Ills.



All Bee-Keepers wanting HIVES OR SECTIONS of any kind, and in any quantity, will confer a favor by sending for my Price List (Price List Free). Direct

CHAMPION BEE HIVE MANUFACTORY,

R. L. SHOEMAKER, Proprietor.

Newcomerstown, Tuscarawas Co. Ohio.



STORY & CAMP,

Manufacturers and Wholesale Dealers in

PIANOS AND ORGANS

Decker Bros.,
Haines Bros.,
Mathushek,
Simpson & Co.,
Story & Camp.

Estey,
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The largest exclusively
Piano and Organ house
on the Continent.

Territory given. Agents Wanted. Protection guaranteed.

Catalogues free to any address.
Write for our prices before buying elsewhere.

STORY & CAMP,

188 & 190 State Street,
CHICAGO.

203 N. Fifth Street,
ST. LOUIS.

HELLO! HELLO!

We are now ready to Book Orders for
Bee-Keepers' Supplies.

White Poplar **SECTIONS** A
Dovetailed Specialty.

Everything fully up with the times, and
At Lowest Figures!

Send stamp for 32-page Catalogue and Samples.
APIARIAN SUPPLY CO.,
7A6m WILTON JUNCTION, IOWA.

Dadant's Foundation Factory, wholesale
and retail. See Advertisement in another column.

J. W. ECKMAN,
DEALER IN

Pure Italian Bees and Queens

For further information, send for Circular.
7A1y RICHMOND, Fort Bend Co. TEXAS.

Palace Bee Hive

And Bee-Keepers' Supplies, One-Piece Dovetailed
Sections, Smokers, etc. Send for Price List.
7A1st H. C. WHITE, MADISON, IND.

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wanted for The Lives of all the
Presidents of the U. S. The
largest, handsomest best book
ever sold for less than twice
our price. The fastest selling
book in America. Immense
profits to agents. All intelligent people want it.
Any one can become a successful agent. Terms
free. HALLETT Book Co., Portland, Maine.
4A1y

A NEW HIVE.

Arranged for continuous combs and continuous
passage-ways. Will be found a pleasure to work
with, and can be easily and rapidly managed. For
comb honey it is without a rival, and as an inven-
tion, is second only to that of movable brood
frames.

Guaranteed to Give Satisfaction.

SEND FOR PRICE LIST AND CIRCULAR.

Address, **DR. G. L. TINKER,**
44A1f NEW PHILADELPHIA, O.

Dadant's Foundation Factory, wholesale
and retail. See Advertisement in another column

\$66 a week at home. \$5.00 outfit free. Pay
absolutely sure. No risk. Capital not
required. Reader, if you want business at
which persons of either sex, young or old,
can make great pay all the time they
work, with absolute certainty, write for
particulars to H. HALLETT & Co., Portland, Maine.
4A1y

FLAT - BOTTOM COMB FOUNDATION,

high side-walls, 4 to 16 square feet to
the pound. Circular and samples free
J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

A PRIZE.

Send six cents for postage,
and receive free, a costly box
of goods which will help you to
more money right away than
anything else in this world. All
of either sex, succeed from first
hour. The broad road to fortune opens before the
workers, absolutely sure. At once address, TRUE
& Co., Augusta, Maine. 4A1y

Muth's Honey Extractor,

Square Glass Honey Jars, Tin Buckets,
Langstroth Bee Hives, Honey Sections, etc.
Apply to **C. F. MUTH,**
976 and 978 Central Ave., CINCINNATI, O.

Send 10c. for Practical Hints to Bee-Keepers.